

# **Strategic Petroleum Reserve**

## **Proposed Appropriation Language**

*For necessary expenses to carry out Strategic Petroleum Reserve facility development and operations and program management activities pursuant to the Energy Policy and Conservation Act of 1975 as amended (42 U.S.C. 6201 et seq.), \$172,100,000 [171,963,000] to remain available until expended.*

### **Explanation of Change**

Increase from FY 2004 appropriation (\$171,963,000) reflects full funding for 128 FTEs and technical/program management support.

# Strategic Petroleum Reserve Office of Fossil Energy

## Overview

### Appropriation Summary by Program

(dollars in thousands)						
	FY 2003 Comparable Appropriation	FY 2004 Comparable Appropriation	FY 2005 Base	FY 2005 Request	FY 2005 Request vs Base	
					\$ Change	% Change
Strategic Petroleum Reserve.....	171,732	170,948	171,355	172,100	+745	+0.4%

### Detailed Funding Table

				(dollars in thousands)		
				FY 2003	FY 2004	FY 2005
<b>Strategic Petroleum Reserve (SPR)</b>						
Facilities Development and Operation.....				157,823	155,044	155,100
Management.....				13,909	15,904	17,000
Total, SPR.....				171,732	170,948	172,100

## Preface

The Strategic Petroleum Reserve provides the United States with adequate strategic and economic protection against disruptions in oil supplies. The program's goal is to mitigate the Nation's energy and security vulnerabilities and to serve as the global benchmark for petroleum reserves.

There are two programs within the Strategic Petroleum Reserve appropriation:

- Facilities Development and Operation
- Management

This Overview will describe Strategic Context, Mission, Benefits, Strategic Goals, and Funding by General Goal. These items together put the appropriation in perspective. The Annual Performance Results and Targets, Means and Strategies and Validation and Verification sections address how the goals will be achieved and how performance will be measured. Finally, this Overview will address the Program Assessment Rating Tool (PART) and Significant Program Shifts in all programs.

## **Strategic Context**

Following publication of the Administration's National Energy Policy, the Department developed a Strategic Plan that defines its mission, four strategic goals for accomplishing that mission, and seven general goals to support the strategic goals. Each appropriation has developed quantifiable goals to support the general goals. Thus the "goal cascade" is the following:

Department Mission → Strategic Goal (25 years) → General Goal (10-15 years) → Program Goal (GPRA Unit) (10-15 years)

To provide a concrete link between budget, performance, and reporting, the Department developed a "GPRA" unit concept. Within DOE, a GPRA Unit defines a major activity or group of activities that support the core mission and aligns resources with specific goals. Each GPRA Unit has completed or will complete a Program Assessment Rating Tool (PART). A unique program goal was developed for each GPRA unit.

The goal cascade accomplishes two things. First, it ties major activities for each program to successive goals, and ultimately to DOE's mission. This helps ensure the Department focuses its resources on fulfilling its mission. Second, the cascade allows DOE to track progress against quantifiable goals and to tie resources to each goal at any level in the cascade. Thus the cascade facilitates the integration of budget and performance information in support of the GPRA and the President's Management Agenda (PMA).

## **Mission**

The mission of the Strategic Petroleum Reserve (SPR) is to store petroleum to reduce the adverse economic impact of a major petroleum supply interruption to the US and to carry out obligations under the international energy program. At the end of 2004, the inventory is projected to be 656 million barrels, which will provide 56 days of net import protection. The Reserve will be filled to its 700 million-barrel capacity in 2005, providing 59 days of net import protection.

## **Benefits**

The U.S. (and trading partner) reliance on oil and U.S. net oil import levels (forecast to increase) combined with location of significant global oil reserves in regions of the world subject to political unrest, have made the U.S. vulnerable to supply disruptions. The presence of the SPR provides protection from supply disruptions.

## **Strategic Goal**

The Department's Strategic Plan identifies four strategic goals: one each for defense, energy, science, and environmental aspects of the mission plus seven general goals that tie to the strategic goals. The Strategic Petroleum Reserve appropriation supports the following goal:

Energy Strategic Goal: To protect our national and economic security by promoting a diverse supply and delivery of reliable, affordable, and environmentally sound energy.

General Goal 4, Energy Security: Improve energy security by developing technologies that foster a diverse supply of reliable, affordable and environmentally sound energy by providing for reliable delivery of energy, guarding against energy emergencies, exploring advanced technologies that make a fundamental improvement in our mix of energy options, and improving energy efficiency.

The programs funded within the Strategic Petroleum Reserve appropriation have one Program Goal that contributes to the General Goals in the “goal cascade”. This goal is:

Program Goal 04.58.00.00: Maintain operational readiness of the Strategic Petroleum Reserve to drawdown at a sustained rate of 4.4 million barrels per day for 90 days, within 15 days notice by the President, and fill the SPR to its current capacity of 700 million barrels by 2005.

### **Contribution to the General Goal**

The programs within the SPR appropriation contribute to General Goal 4 by assuring the Reserve is maintained in a high state of readiness. Assurance is measured by how quickly the program can respond to a Presidential direction to draw down; how much of the oil inventory in SPR storage is available; and the cost efficiency of operations. Facilities Development and Operations funds all requirements associated with developing and maintaining facilities for the storage of petroleum, operations associated with placing petroleum into storage, and operational readiness initiatives associated with drawing down and distributing the inventory in 13 - 15 day s notice in the event of an emergency. Management funds personnel and administrative expenses related to maintaining the Project Management Office (New Orleans, Louisiana) and the Program Office (Washington, DC), as well as contract services required to support management and the technical analysis of program issues.

### **Funding by General Goal**

(dollars in thousands)

	FY 2003	FY 2004	FY 2005	\$ Change	% Change
General Goal 4, Energy Security					
Program Goal 04.58.00.00					
Petroleum Reserves	171,732	170,948	172,100	+1,152	+0.7%
Total.....	173,687	170,948	172,100	+1,152	+0.7%

FY 2000 Results	FY 2001 Results	FY 2002 Results	FY 2003 Results	FY 2004 Targets	FY 2005 Targets
<u>Facilities Development &amp; Operations and Management</u>					
Complete the Life Extension Program to ensure the long-term reliability, effectiveness, and operational readiness of SPR facilities and systems. (MET GOAL)					
Ensure the achievement of a calculated site availability of 95 percent or greater with drawdown capability of 4.1 million barrels per day for a sustained 90-day period within 15 days notice by the President. (MET GOAL)					
	Establish a Northeast Heating Oil Reserve of up to two million barrels. (MET GOAL)				
Complete contracting for the transfer and/or exchange of 28 million barrels of Federal Royalty Oil from the Department of the Interior for a net increase of approximately 23 million barrels in the SPR inventory, with deliveries of a remaining four million barrels in FY 2001. (MET GOAL)	Complete the transfer of Phase I - Federal Royalty Oil to the SPR by November 2000 per the FY 1999 Agreement with the Department of Interior. (MET GOAL)	Complete the transfer of Phase II and III - Federal Royalty Oil to the SPR. (MET GOAL - Added approximately 19.6 million of Royalty Oil that contributed to the total delivery to inventory of 42.5 million barrels from all Exchange and Federal Royalty Oil agreements.)	Increase crude oil inventory to 628 million barrels. (GOAL NOT MET - The inventory of the SPR at the end of September was 624.4MMB. The variance was caused by deferral of nearly 20 MMB in oil receipts during the Venezuela oil crisis. For this deferral, we will receive an additional 2.9MMB crude premium.)	Increase crude oil inventory to 656 million barrels.	

FY 2000 Results	FY 2001 Results	FY 2002 Results	FY 2003 Results	FY 2004 Targets	FY 2005 Targets
		Achieve maximum sustained (90 day) drawdown rate of 4.2 MMB (MET GOAL)	Achieve maximum sustained (90 day) drawdown rate of 4.3 MMB (MET GOAL)	Achieve maximum sustained (90 day) drawdown rate of 4.4 MMB.	Achieve maximum sustained (90 day) drawdown rate of 4.4 MMB.
		Achieve $\geq 95\%$ of monthly maintenance and accessibility goals. (EXCEEDED GOAL WITH 98%)	Achieve $\geq 95\%$ of monthly maintenance and accessibility goals. (EXCEEDED GOAL WITH 98%)	Achieve $\geq 95\%$ of monthly maintenance and accessibility goals.	Achieve $\geq 95\%$ of monthly maintenance and accessibility goals.
		Award firm fixed-price turnkey (design/build) contract to provide a portable degas plant for continuous removal of excess gas from the SPR crude oil inventory. (MET GOAL)	Complete the Degas Plant design. (MET GOAL)	Commence full Degas Plant operations at a rate of 100,000 – 150, 000 barrels per day by May, 2004 at the Big Hill, TX storage site.	Degas 30 MMB of crude oil inventory.
		Achieve operating cost per barrel of capacity of \$0.206 (EXCEEDED GOAL WITH \$0.198)	Achieve operating cost per barrel of capacity of \$0.213 (EXCEEDED GOAL WITH \$0.2004)	Degas 23 MMB of crude oil inventory. Achieve operating cost per barrel of capacity of \$0.207	Achieve operating cost per barrel of capacity of \$0.207

## **Means and Strategies**

The SPR will use various means and strategies to continue its mission and achieve program goals. Assurance of a readiness posture will be accomplished through internal readiness reviews, assessments, exercises, and tests. Effectiveness of the SPR to mitigate the economic damage of severe oil supply disruptions will be influenced by the SPR's size (inventory and capacity) and ability to deliver into the marketplace. Since FY 1999, the Department has been using agreements with the Department of the Interior to use Federal Royalty Oil to fill the SPR to its 700 million barrel capacity. Completion of deliveries is scheduled for 2005. The SPR's Vapor Pressure Mitigation Program includes construction of a portable vapor pressure (degas) plant for continuous removal of excess gas from the crude oil inventory. Full degas plant operations (at a rate of 100,000 – 150,000 barrels per day) will be initiated in FY 2004.

Performance can be affected by external factors including petroleum market conditions and developments in the commercial distribution system (i.e., pipelines, and terminals). Continuing royalty-in-kind transfers beyond FY 2003 will be contingent on annual delivery targets negotiated with the Department of the Interior.

## **Validation and Verification**

There is a hierarchy of performance information for the SPR. The Department collects & tracks the "critical few" measures. The SPR Program Office monitors limited, specific, short and long-term measures. The SPR Project Management Office manages the detailed, operational measures that are implemented by the contractors. Organizational and action plans are reviewed and analyzed at quarterly Program Reviews. Monthly Project Assessments and Project Reviews are conducted to analyze performance against all milestones and contracts. These reviews provide an opportunity to discuss performance and provide direction to contractors. These same measures are reviewed daily during the site managers' site status meetings. Budget formulation/ execution assessments are regularly conducted throughout the year, including annual budget validations. Other evaluations include: semiannual M&O contractor award fee performance assessments against Work Authorization Directives; on-site reviews to verify operational, maintenance and management performance data; and draw down readiness quarterly reviews.

## **Program Assessment Rating Tool (PART)**

The Department implemented a tool to evaluate selected programs. PART was developed by the Office of Management and Budget (OMB) to provide a standardized way to assess the effectiveness of the Federal Government's portfolio of programs. The structured framework of the PART provides a means through which programs can assess their activities differently than through traditional reviews.

The current focus is to establish outcome- and output-oriented goals, the successful completion of which will lead to benefits to the public, such as increased national security and energy security, and improved environmental conditions. DOE has incorporated feedback from OMB into the FY 2005 Budget Request, and the Department will take the necessary steps to continue to improve performance.

Assessment under the PART found the SPR to be an effective program, well designed with a clear

mission. The total program score was 92%, with individual sections scoring as follows: 1Program Purpose and Design - 100%, Strategic Planning – 88%, Program Management - 100%, and Program Results – 87%. OMB found that the Department’s budget was not sufficiently aligned with program goals to distinguish the impact of funding changes on performance. To address these findings, there is a stronger link between the goals and funding request as shown in this budget submission.

## **Significant Program Shifts**

In November 2001, the President directed the Secretary of Energy to continue using the royalty oil transfer plan initiated in 1999, as a means to fill the Reserve to its current capacity of 700 million barrels. Filling the SPR to 700 million barrels is scheduled for completion in 2005.

The Strategic Petroleum Reserve continues to intermittently operate at a higher security alert. Additional security protection Officers have been placed on duty at all sites and a series of 40 security measures have been implemented, as directed by the Office of Security Operations at Department of Energy headquarters. In addition, permanent physical security enhancements have been implemented in response to the perceived threat of continued terrorist activity.

Due to continued geothermal heating and renewed gas intrusion into the crude oil, the SPR initiated a second vapor pressure mitigation program. Continuous removal of excess gas from the SPR crude oil inventory will commence in May 2004. Through degassing, the SPR will be able to maintain its full mission capability while delivering crude oil that meets all safety and environmental standards.



# Strategic Petroleum Reserve Office of Fossil Energy

## Funding By Site By Program

	(dollars in thousands)				
	FY 2003	FY 2004	FY 2005	\$Change	%Change
SPR Project Offices .....	164,605	162,508	163,103	+595	+0.4%
Washington Headquarters .....	3,469	4,618	5,120	+502	+10.9%
Sandia National Laboratories.....	2,558	2,612	2,667	+55	+2.1%
National Energy Technology Laboratory.....	750	860	860	0	0%
Oak Ridge Operations Office/Oak Ridge National Laboratory.....	350	350	350	0	0%
Total, SPR.....	171,732	170,948	172,100	+1,152	+0.7%

## Site Description

### SPR Project Offices

The sites located in Texas and Louisiana provide all operational readiness activities (operations, maintenance, security, etc) for the Reserve. Also includes technical and program management support in Washington, DC and New Orleans, Louisiana.

### Washington Headquarters

The Washington Headquarters includes technical and program management support in Washington, DC.

### Sandia National Laboratory

The Sandia National laboratory, located in Albuquerque, NM, provides technical, comprehensive, site-specific engineering research and development support for the planning, design, development, and monitoring of Strategic Petroleum Reserve (SPR) crude oil storage facilities.

### National Energy Technology Laboratory

The National Energy Technology Laboratory (NETL) located in Morgantown, WV, Pittsburgh, PA and Tulsa, OK is a multipurpose laboratory, owned and operated by the U.S. Department of Energy. NETL conducts detailed analysis of crude oil streams, caverns and storage cavern composites to ascertain the quality of stored oil on selected oil samples. These measurements include the vapor pressure and gas-oil ratio.

## **Oak Ridge National Laboratory**

The Oak Ridge National Laboratory (ORNL), located in Oak Ridge, TN, provides analytic support to the SPR by documenting SPR analysis models, assisting in the development of SPR oil valuation and bid analysis tools, evaluating potential applications of DIS-Risk model approach related to energy policy issues and evaluating SPR planning alternatives.

# Facilities Development and Operation

## Funding Profile by Subprogram

(dollars in thousands)

	FY 2003 Comparable Appropriation	FY 2004 Comparable Appropriation	FY 2005 Base	FY 2005 Request	FY 2005 Request vs Base	
					\$ Change	% Change
Facilities Development and Operations .....	157,823	155,044	155,044	155,100	+56	+0%
Total, Facilities Development and Operations.....	157,823	155,044	155,044	155,100	+56	+0%

### Public Law Authorization:

P.L. 94-163, “Energy Policy and Conservation Act” (FY 2003)

### Mission

The mission of Facilities Development and Operation is to provide for all requirements associated with developing and maintaining facilities for the storage of petroleum, as well as operations associated with placing petroleum into storage. Operational readiness activities associated with drawing down and distributing the inventory on a 13-15 day notice in the event of an emergency are also included.

### Benefits

Facilities Development and Operation provides funding for protection from supply disruptions. The U.S. (and trading partner) reliance on oil and U.S. net oil import levels (forecast to increase) combined with location of significant global oil reserves in regions of the world subject to political unrest, have made the U.S. vulnerable to supply disruptions.

## Detailed Justification

(dollars in thousands)

	FY 2003	FY 2004	FY 2005
<b>Facilities Development and Operations.....</b>	157,823	155,044	155,100

Continue activities for renewed vapor pressure mitigation, to include full degas plant operations at a rate of 100,000 – 150,000 barrels per day. Maintain the Drawdown Readiness Program and perform annual exercises. Continue Recovery Program exercises to maintain readiness and reliability. Address risk reduction by continuing the ES&H program and corrective action plan activity. Continue RIK transfer program with the Department of the Interior to fill the Reserve to capacity in 2005.

**Strategic Petroleum Reserves  
Facilities Development and Operations**

**FY 2005 Congressional Budget**

FY2004 and FY 2003 activities included completion of site modifications at the Big Hill storage site and initiation of degas activities in May 2004. Continued delivery of exchanged and Federal Royalty Oil. Maintained the Drawdown Readiness Program and performed annual exercises. Continued Recovery Program exercises to maintain readiness and reliability. Continued ES&H Program and corrective action plan activity developed to address unacceptable risk.

**Total, Facilities Development and Operations.....**

157,823

155,044

155,100

**Explanation of Funding Changes**

**FY 2005 vs.  
FY 2004  
\$ (000)**

**Facilities Development & Operations**

Increased cost of security requirement (SECON2), offset by decrease in power requirements due to reduction in RIK barrels delivered..... +56

**Total Funding Change, Facilities Development & Operations ..... +56**

## Management

### Funding Profile by Subprogram

(dollars in thousands)

	FY 2003 Comparable Appropriation	FY 2004 Comparable Appropriation	FY 2005 Base	FY 2005 Request	FY 2005 Request vs Base	
					\$ Change	% Change
Management .....	13,909	15,904	16,453	17,000	+547	+3.3%

### Mission

The mission of Management is to provide for all costs of personnel and administration related to maintaining the Project Management Office in New Orleans, Louisiana and the Program Office in Washington, DC. Includes funding for contract services required to support management and the technical analysis of program issues.

### Benefits

Management provides funding for federal staff and contract support services to ensure protection from oil supply disruptions. Reliance on oil and U.S. net oil import levels (forecast to increase) combined with location of significant global oil reserves in regions of the world subject to political unrest, have made the U.S. vulnerable to oil supply disruptions.

### Detailed Justification

(dollars in thousands)

	FY 2003	FY 2004	FY 2005
<b>Salaries and Benefits</b> .....	12,238	12,382	12,931

Funds salaries and benefits for 128 full time equivalent employees to assure achievement of Level 1 Performance criteria for drawdown and distribution. Provide for support and oversight of M&O contractor and subcontractor activities and program operations.

140                      473                      493

Provides travel to assure capability to achieve Level 1 Performance criteria for drawdown and distribution. FY 2003 requirements were offset with available carryover. FY2004 and FY 2005 reflect full funding requirements.

<b>Support Services</b> .....	986	1,000	1,400
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Provide analytic support for SPR development, fill and distribution policy decisions. Includes distribution modeling maintenance. FY 2003 and FY 2004 requirements were offset with available carryover. FY 2005 reflects full funding requirements.

<b>Other Related Expenses</b> .....	545	2,049	2,176
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Major elements are communications, building lease and electric power for DOE-occupied space (New Orleans, Louisiana), training, small purchases, and personal computer hardware and software. Also includes contractual services, supplies and materials.

<b>Total, Management</b> .....	13,909	15,904	17,000
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### Explanation of Funding Changes

<b>FY 2005 vs. FY 2004 \$ (000)</b>
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#### Management

Mandatory increase for Cost of Living adjustment and general pay raises ..... + 549

Increase reflects full funding for 128 FTE's and technical/program management support ..... +547

**Total Funding Change, Management** ..... **+1,096**

## Management

### Funding Profile by Category

(dollars in thousands/whole FTEs)

	FY 2003	FY 2004	FY 2005	\$ Change	% Change
<b>Washington Headquarters</b>					
Salaries and Benefits.....	2,998	3,113	3,243	+130	+4.2%
Travel.....	140	160	180	+20	+12.5%
Support Services .....	986	1,000	1,400	+400	+40.0%
Other Related Expenses .....	494	543	787	+244	+44.9%
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Total, Washington Headquarters .....	4,618	4,816	5,610	+794	+16.5%
Full Time Equivalents .....	27	27	27	0	0.0%
 <b>Strategic Petroleum Reserve Project Office</b>					
Salaries and Benefits.....	9,240	9,269	9,688	+419	+4.5%
Travel.....	0	313	313	0	+0%
Support Services .....	0	0	0	0	+0%
Other Related Expenses .....	51	1,506	1,389	-117	-7.8%
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Total, Strategic Petroleum Reserve Project Office.....	9,291	11,088	11,390	+302	+2.7%
Full Time Equivalents .....	101	101	101	0	0.0%
 <b>Total, Strategic Petroleum Reserve</b>					
Salaries and Benefits.....	12,238	12,382	12,931	+549	+4.4%
Travel.....	140	473	493	+20	+4.2%
Support Services .....	986	1,000	1,400	+400	+40.0%
Other Related Expenses .....	545	2,049	2,176	+127	+6.2%
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Total, Strategic Petroleum Reserve .....	13,909	15,904	17,000	+1,096	+6.9%
Total, Full Time Equivalents .....	128	128	128	0	0.0%

**SUMMARY OF SUPPORT FOR  
ENERGY INFORMATION ADMINISTRATION (EIA)**

**Strategic Petroleum Reserve**

(dollars in thousands)

PROGRAM	FY 2003	FY 2004	FY 2005
Energy Modeling Forum	6	5	5
ADP System Utilization	50	50	50
Petroleum Analysis/Subscripts	<u>85</u>	<u>65</u>	<u>65</u>
Total	140	120	120

Per the Memorandum of Understanding between the EIA and SPR dated June 13, 1983, funding is provided for the services as computer usage and hardware support, logistics information, and data collection.



## MINORITY EDUCATIONAL INSTITUTION

### Strategic Petroleum Reserve

(dollars in thousands)

<u>Appropriation/Decision Unit</u>	<u>Name of Institution</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
Strategic Petroleum Reserve	Virginia State	10		
	Southern University Law	10		
	Albany State	10		
	Fort Valley State	10		
	University of Notre Dame	10		
	UT @ El Paso	20		
	University of Puerto Rico	10		
	Prairie View A&M	10		
	University of LA @ Lafayette	10		
	Unknown		100	100
Total		100	100	100